



PTO/SB/08A (08-03)

Substitute for form 1449A/PTO			Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	10/644,406	
			Filing Date	August 19, 2003	
			First Named Inventor	NIEMEYER, GUNTER D.	
			Art Unit	2421 2125	
			Examiner Name	Unassigned Garland	
Sheet	1	of	5	Attorney Docket Number	017516-002130US

U.S. PATENT DOCUMENTS+					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ² (if known)			
a l l c k d s n c	AA	3,818,284	06-18-1974	deVersterre et al.	
	AB	3,905,215	09-16-1975	Wright	
	AC	3,923,166	12-02-1975	Fletcher et al.	
	AD	4,150,326	04-17-1979	Engelberger et al.	
	AE	4,349,837	09-14-1982	Hinds	
	AF	4,722,056	01-26-1988	Roberts et al.	
	AG	4,762,455	08-09-1988	Coughlan et al.	
	AH	4,833,383	05-23-1989	Skarr et al.	
	AI	4,837,734	06-06-1989	Ichikawa et al.	
	AJ	4,853,874	08-01-1989	Iwamoto et al.	
	AK	4,860,215	08-22-1989	Seraji	
	AL	4,863,133	09-05-1989	Bonnell	
	AM	4,942,539	07-17-1990	Yuan et al.	
	AN	4,979,949	12-25-1990	Matsen, III et al.	
	AO	4,989,253	01-29-1991	Liang et al.	
	AP	5,046,022	09-03-1991	Conway et al.	
	AQ	5,182,641	01-26-1993	Diner et al.	
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	AS	5,187,796	02-16-1993	Wang et al.	
	AT	5,217,003	06-08-1993	Wilk	
	AU	5,279,309	01-18-1994	Taylor et al.	
	AV	5,299,288	03-29-1994	Glassman et al.	
	AW	5,313,306	05-17-1994	Kuban et al.	
	AX	5,321,353	06-14-1994	Fumess	
	AY	5,341,950	08-30-1994	Sinz	
	AZ	5,343,385	08-30-1994	Joskowicz et al.	
	BA	5,368,015	11-29-1994	Wilk	
	BB	5,382,885	01-17-1995	Salcudean et al.	
	BC	5,397,323	03-14-1995	Taylor et al.	
BD	5,402,801	04-04-1995	Taylor		
BE	5,417,210	05-23-1995	Funda et al.		
BF	5,430,643	07-04-1995	Seraji		
BG	5,503,320	04-02-1996	Webster et al.		
BH	5,515,478	05-07-1996	Wang		
BI	5,524,180	06-04-1996	Wang et al.		
BJ	5,553,198	09-03-1996	Wang et al.		
BK	5,624,398	04-29-1997	Smith et al.		
BL	5,631,973	05-20-1997	Green		
BM	5,657,429	08-12-1997	Wang		
BN	5,737,500	03-07-1998	Seraji et al.		
BO	5,754,741	05-19-1998	Wang et al.		

Examiner Signature	<i>Garland</i>	Date Considered	11/13/05
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		Application Number	10/644,406		
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		First Named Inventor	NIEMEYER, GUNTER D.		
		Art Unit	2124 2125		
Sheet	2	of	5	Examiner Name	Unassigned Garland
				Attorney Docket Number	017516-002130US

U.S. PATENT DOCUMENTS+						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
SRB	BP	5,762,458		06-09-1998	Wang et al.	
SRB	BQ	5,784,542		07-21-1998	Ohm et al.	
SRB	BR	5,791,231		08-11-1998	Cohn et al.	
SRB	BS	5,797,900		08-25-1998	Madhani et al.	
SRB	BT	5,808,665		09-15-1998	Green	
SRB	BU	5,810,880		09-22-1998	Jensen et al.	
SRB	BV	5,814,038		09-29-1998	Jensen et al.	
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SRB	BX	5,820,545		10-13-1998	Arbter et al.	
SRB	BY	5,855,553		01-05-1999	Tajima et al.	
SRB	BZ	5,855,583		01-05-1999	Wang et al.	
SRB	CA	5,855,583		01-05-1999	Wang et al.	
SRB	CB	5,859,934		01-12-1999	Green	
SRB	CC	5,876,325		03-02-1999	Mizuno et al.	
SRB	CD	5,878,193		03-02-1999	Wang et al.	
SRB	CE	5,907,664		03-25-1999	Wang et al.	
SRB	CF	5,911,036		06-08-1999	Wright et al.	
SRB	CG	5,931,832		08-03-1999	Jensen	
SRB	CH	5,971,976		10-26-1999	Wang et al.	
SRB	CI	6,424,885		07-01-2002	Niemeyer et al.	

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Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
SRB	CJ	WO	95/01757					<input type="checkbox"/>
	CK	WO	97/29690					<input type="checkbox"/>
	CL	WO	97/43942					<input type="checkbox"/>
	CM	WO	97/43943					<input type="checkbox"/>

Examiner Signature	<i>Garland</i>	Date Considered	1/13/05
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		Filing Date	August 19, 2003		
		First Named Inventor	NIEMEYER, GUNTER D.		
		Art Unit	2121-2125		
		Examiner Name	Unassigned Garlad		
Sheet	3	of	5	Attorney Docket Number	017516-002130US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
Snb	CN	Adams et al., "Computer-assisted surgery," IEEE Computer Graphics & Applications, (May 1990) pp. 43-51.	
Snb	CO	Alexander, III Impacts of telemation on modern society, Intl. Centre for Mechanical Sciences, 1st CISM-IFTOMM Symposium, on Theory and Practice of Robots and Manipulators, (Sep. 5-8, 1973), vol. II, pp. 122-136.	
Snb	CP	Arai et al. "Bilateral control for manipulators with different configurations", IECON Int'l Conference on Industrial Electronics, Control and Instrumentation, (Oct. 22-26, 1984), vol. 1:pp. 40-45.	
	CQ	Baumann, R., Thesis No. 1734 entitled "Haptic interface for virtual reality based laparoscopic surgery training environment" for Master of Science in Computer and Systems Engineering, Rensselaer Polytechnic Institute, USA (1997) pp. 98-103.	
Snb	CR	Bejczy et al., "Controlling remote manipulations through kinesthetic coupling" Computers in Mechanical Engineering (Jul. 1983) pp. 48-60.	
Snb	CS	Borovoi, A.V., "Stability of a manipulator with force feedback," Izv. AN SSSR Mekhanika Tverdogo Tela, (1990) vol. 25, No. 1, pp. 37-44.	
Snb	CT	Burdea et al., "Dextrous telerobotics with force feedback--an overview, Part 2: Control and implementation," Robotica (1991) vol. 9, pp. 291-298.	
Snb	CU	Cohn, Michael C., http://www-bsac.eecs.berkeley.edu/ (Nov. 1, 1996) 14 pages.	
Snb	CV	Colgate, J. Edward, "Power and impedance scaling in bilateral manipulation," Proceedings of 1991 IEEE Intl. Conf. on Robotics and Automation, Sacramento, CA, (Apr. 1991) pp. 2292-2297.	
Snb	CW	Fisher, S.S., "Virtual interface environment," IEEE/AIAA 7th Digital Avionics Systems Conference, (Oct. 13-16, 1986) Ft. Worth, Texas, pp. 346-350.	
Snb	CX	Fu, et al., "Robotics: control, sensing, vision, and intelligence," McGraw-Hill Book Company, (1987), Ch. 2 & 5, pp. 12-265.	
Snb	CY	Fukuda et al., "A new method of master-slave type of teleoperation for a micro-manipulator system" IEEE Microrobots and Teleoperators Workshop (1987), 5 pages.	
Snb	CZ	Funda, et al., "Constrained cartesian motion control for teleoperated surgical robots," IEEE Transactions on Robotics and Automation, (Jun. 1996) vol. 12, No. 3, pp. 453-465.	
Snb	DA	Furuta et al., "Master-slave manipulator based on virtual internal model following control concept," IEEE Int'l. Conference on Robotics and Automation, Raleigh, North Carolina, (Mar. 31-Apr. 3, 1987) vol. 1, pp. 567-572.	
Snb	DB	Green et al., "Mobile telepresence surgery," 2nd Annual Intl. Symposium on Medical robotics and Computer Assisted Surgery, Baltimore, Maryland, (Nov. 4-7, 1995) pp. 97-103.	
Snb	DC	Hannaford et al., "Experimental and simulation studies of hard contact in force reflecting teleoperation," IEEE (1988) pp. 584-589.	

Examiner Signature	<i>Garlad</i>	Date Considered	11/13/05
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Application Number		10/644,406	
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First Named Inventor		NIEMEYER, GUNTER D.	
Art Unit		2124 2125	
Examiner Name		Unassigned Garland	
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Sheet	4	of	5

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
SR6	DD	Hill et al., "Telepresence surgery demonstration system," IEEE 1050-4729/94, pp. 2302-2307, 1994.	
SR6	DE	Hurteau et al., "Laparoscopic surgery assisted by a robotic cameraman: Concept and experimental results," 1444 Intl. Conf. on Robotics and Automation, (May 8-13, 1994) pp. 2286-2289.	
SR6	DF	Inoue et al., "Six-axis bilateral control of an articulated slave manipulator using a Cartesian master manipulator," Advanced Robotics, (1990) vol. 4, No. 2, pp. 139-150.	
SR6	DG	Jones et al., "Next-generation 3D videosystems may improve laparoscopic task performance," Interactive Technology and the New Paradigm for Healthcare, (1995) Ch. 25, pp. 152-160.	
SR6	DH	Kazerooni et al., "The dynamics and control of a haptic interface device," IEEE Transactions on Robotics and Automation, (Aug. 1994) vol. 10, No. 4, pp. 453-464.	
SR6	DI	Kazerooni, H., "Human/robot interaction via the transfer of power and information signals, Part I: Dynamics and control analysis," IEEE, CH2750, (8/89) pp. 1632-1640.	
SR6	DJ	Kim et al., "Active compliance and damping in telemanipulator control," Jet Propulsion Laboratory New Technology Report, JPL & NASA Case No. NPO-17969/7466, (Apr. 1991) vol. 15, No. 4, Item 40, pp. i-14a.	
	DK	Komada et al., "Bilateral robot hand based on estimated force feedback," Proceedings IECON '87, Cambridge, MA, November 3-6, 1987, pp. 602-607.	
SR6	DL	Kwoh, et al., "A robot with improved absolute positioning accuracy for CT guided stereotactic brain surgery," IEEE Transactions on Biomedical Engineering, (Feb. 1998), vol. 35, No. 2, pp. 153-160.	
	DM	Lazarevic, "Feasibility of a Stewart Platform with Fixed Actuators as a Platform for CABG Surgery Device" Master's Thesis, Columbia University, Department of Bioengineering, pp. 1-45.	
	DN	Madhani, Akhil Jiten, Dissertation entitled Design of Teleoperated Surgical Instruments for Minimally Invasive Surgery, Mass. Institute of Tech. (Feb. 1998)	
SR6	DO	Massie et al., "The phantom haptic interface: a device for probing virtual objects," Proceedings of the ASME Winter Annual Mtg., Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems, Chicago (Nov. 1994) pp. 1-7.	
SR6	DP	Mitsuishi et al., "A tele-micro-surgery system with co-located view and operation points and a rotational-force-feedback-free master manipulator," 2nd Annual Intl. Symposium on Medical robotics and Computer Assisted Surgery, Baltimore, Maryland, (Nov. 4-7, 1995) pp. 111-118.	
SR6	DQ	Neisius et al., "Robotic manipulator for endoscopic handling of surgical effectors and cameras" Proceedings of the First International Symposium on Medical Robotics and Computer Assisted Surgery, Vol. 2, Workshop (Part I & II)- Session VI, pp. 169-175.	
	DR	Neisius et al., "Robotic manipulator for endoscopic handling of surgical effectors and cameras," 1st Intl. Symposium on Medical Robotics and Computer Assisted Surgery, Workshop (Part I & II)-Session VI, Pittsburgh, Pennsylvania (Sep. 22-24, 1994) vol. 2, pp. 169-175.	
SR6	DS	Sastry et al., "Millirobotics for remote, minimally-invasive surgery," Proceedings of the Intl. Workshop on Some Critical Issues in Robotics, Singapore (Oct. 2-3, 1995) pp. 82-98.	

Examiner Signature	<i>Malik</i>	Date Considered	11/13/05
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		Application Number	10/644,406		
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		First Named Inventor	NIEMEYER, GUNTER D.		
		Art Unit	2124 2125		
		Examiner Name	Unassigned Garland		
Sheet	5	of	5	Attorney Docket Number	017516-002130US

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snb	DT	Sastry, Shankar, http://robotics.eecs.berkeley.edu/ (Nov. 1, 1996) 8 pages.	
snb	DU	Taubes, G., "Surgery in cyberspace," Discover (Dec. 1994) vol. 15, No. 12, pp. 84-94.	
	DV	Thring, "Robots and telechairs: Manipulators with memory; remote manipulators; machine limbs for the handicapped" (1993) M.W. Thring/Ellis Horwood Ltd. pp. 9-11, 122-131, 194-195, 235-257, 274-279.	
snb	DW	Thring, M.W., "Robots and telechairs: manipulators with memory; remote manipulators; machine limbs for the handicapped," (1983) Ch. 5:pp. 8-11; Ch. 5:122-131. Ch. 7:194-195; Ch. 8:236-279.	
snb	DX	Trevelyan et al., "Motion control for a sheep shearing robot," First Intl. Symposium, Robotics Research, Edited by M. Brady and R. Paul, MIT Press, Cambridge, MA, (1984) Chapter 2, pp. 177-190.	
snb	DY	Vibet, C., "Properties of master-slave robots," Motor-Con '87, Hannover, FRG, (Apr. 2-4, 1987), pp. 309316.	

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SNO	AA	US-5,841,950 A	24 NOV 1998	WANG YULUN ET AL.	
	AB	US-			
	AC	US-			
	AD	US-			
	AE	US-			
	AF	US-			
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	AR	US-			
	AS	US-			
	AT	US-			

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